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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/081,851      | 02/22/2002  | Robert J. Thomas     | 8156-179            | 2100             |

7590 04/26/2004

Woodard, Emhardt, Naughton, Moriarty and McNett  
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Suite 3700  
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Indianapolis, IN 46204-5137

EXAMINER

MOHANDESI, IRAJ A

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2834

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n N .

10/081,851

Applicant(s)

THOMAS ET  
AL.1008185110081851

Examiner

Iraj A Mohandesi

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-- The MAILING DATE of this communication appears n the cover sheet with the correspondence address --

**Peri d f r Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04/05/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disp sition of Claims**

- 4) ☒ Claim(s) 1-24 and 26-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-15, 17-, 28, 33-48 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 29-32 is/are rejected.
- 7) ☒ Claim(s) 9, 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/05/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Pri rity under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing R view (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 04/29/2002.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-8 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation "at least one of the natural gas, propane, and petroleum gas" is vague and indefinite, there is a contradiction in the limitation.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. **Claims 1** is rejected under 35 U.S.C. 102(a) as being anticipated by **Scott US Patent 6,414,400**<sup>or</sup> any combustion engine.

3. Regarding **Claims 1-8**, **Scott'400** discloses a method for regulating an engine (102), comprising: providing an engine (102) including one or more combustion chambers and a source of gaseous fuel mixing gaseous fuel and air upstream of the one or more combustion chambers to provide a mixture of air and fuel to the engine for combustion (128 column 3, line 64) driving an electric power generator (104, column 2

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line 46,) with the engine, the generator being operable to provide AC electric power ( alternator 104) and adjusting a ratio between air and fuel in the mixture ( see column 5,line 44, 128 throttle controls the gas mixture to regulate the engine speed “ frequency of the AC electric power provided by the generator”) inherently a fuel line to supply fuel to the engine, a throttle (128) configured to regulate flow of the mixture, includes changing ignition timing (116 ,column 4,line 5) for the one or more combustion chambers to maintain a desired rotational engine speed, a controller ( 100 column 5,line 32) responsive to the first signal to generate a valve control signal to regulate engine speed relative to a desired rotational engine speed; a controllable valve responsive to said valve control signal to adjust a ratio of a mixture of fuel and air provided to said engine for combustion.

***Allowable Subject Matter***

4. Claims 11-15 are allowed:

The following is an examiner's statement of reasons for allowance.

The prior art of the record in particular **Scott'400** does not teach or suggest a supporting structure for a method, comprising: operating an internal combustion engine including inter alia ,a first sensor to sense rotational speed of said engine and output a first signal corresponding thereto; a second sensor to sense manifold pressure and output a second signal corresponding thereto a controller responsive to said first signal and said second signal to generate a valve con control signal to regulate engine speed relative to a desired rotational engine speed in accordance with a number of gain

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multipliers each determined as a function of the rotational speed of said engine with the manifold pressure by adjusting a ratio of a mixture of fuel and air provided to said engine for combustion.

Claims 17-32 are allowed :

The new independent claim 17 includes the limitation of the previously allowable dependent claim 25.

5. The following is an examiner's statement of reasons for allowance.

The prior art of the record in particular **Scott'400** does not teach or suggest a supporting structure for a method, comprising: operating an internal combustion engine including a manifold coupled to a number of combustion chambers providing a mixture of fuel and air to the combustion chambers through the manifold; detecting a change in rotational speed of the engine, adjusting the mixture from a first fuel-to-air ratio to a second fuel-to-air ratio in response to said detecting to regulate the rotational speed of the engine, which includes governing the rotational speed of the engine with a PID controller and driving an electric power generator with the engine during said adjusting.

Claims 33-48 are allowed :

Claim 33 includes now the subject of matter, which was allowable if would be written in independent form.

Claim 33 has been included in claim 1 and rewritten as a independent claim 33.

6. The following is an examiner's statement of reasons for allowance.

The prior art of the record in particular **Scott'400** does not teach or suggest a supporting structure for a method, comprising ;operating an internal combustion engine.

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Inter alia providing an engine including one or more combustion chambers and a source of fuel; mixing the fuel and air upstream of the one or more combustion chambers to provide a mixture of air and fuel to the engine for combustion', driving an electric power generator with the engine, the generator being operable to provide AC electric power; adjusting a ratio between air and fuel in the mixture to regulate frequency of the AC electric power provided by the generator; and regulating rotational speed of the engine with a PID control based on a number of multipliers selected as a function of an engine manifold pressure.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Communication***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iraj A Mohandesi whose telephone number is 571-272-2028. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IM April 15, 2004

A handwritten signature in black ink, appearing to read 'N. Ponomarenko', followed by a horizontal line.

**Nicholas Ponomarenko**  
**Primary Examiner**  
**Technology Center 2800**